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# A Rare Presentation of an Abdominal Lymphoepithelial Cyst with New Roots

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## CASE REPORT

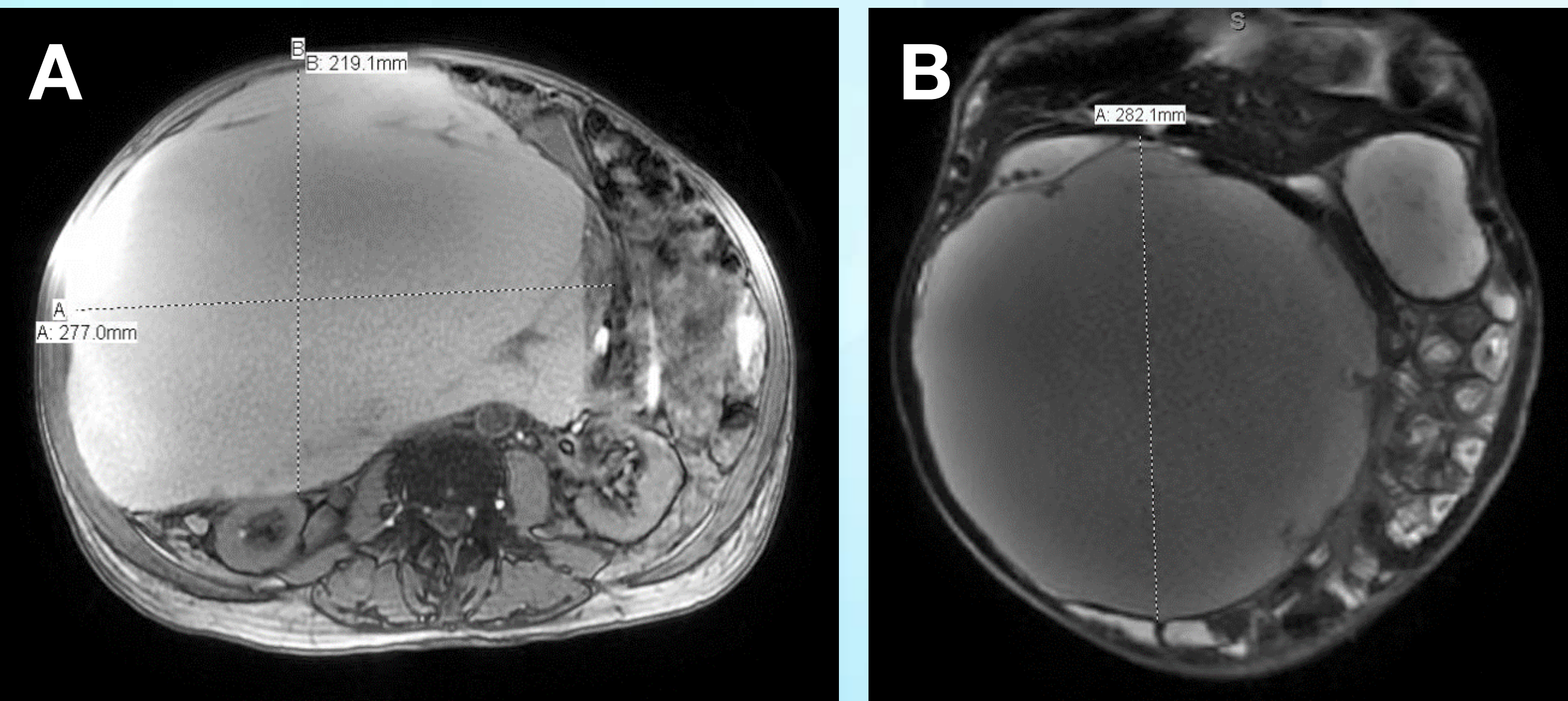
### INTRODUCTION

Abdominal benign lymphoepithelial cysts (LEC) are rare benign cystic lesions of undetermined pathogenesis. They are classified as true cysts, lined by squamous epithelium and surrounded by mature lymphoid cells with germinal centers.<sup>1</sup> Within the abdomen, these are typically seen within the pancreas as reported by a limited number of case studies since their first discovery by Luchtrath and Schrievers in 1985.<sup>2</sup> Evaluation of pancreatic cysts should not be taken cautiously as neoplastic pancreatic cystic lesions also exist. Radiographically and preoperatively it is often difficult to differentiate between benign vs. malignant lesions.<sup>3</sup> Thus, most patients will undergo biopsies and even resections to determine their etiology. In the following report, we present evidence of an abdominal LEC originating from a location other than the pancreas; the mesenteric root. To our knowledge, this may represent the one of the first few documented cases of such a finding.

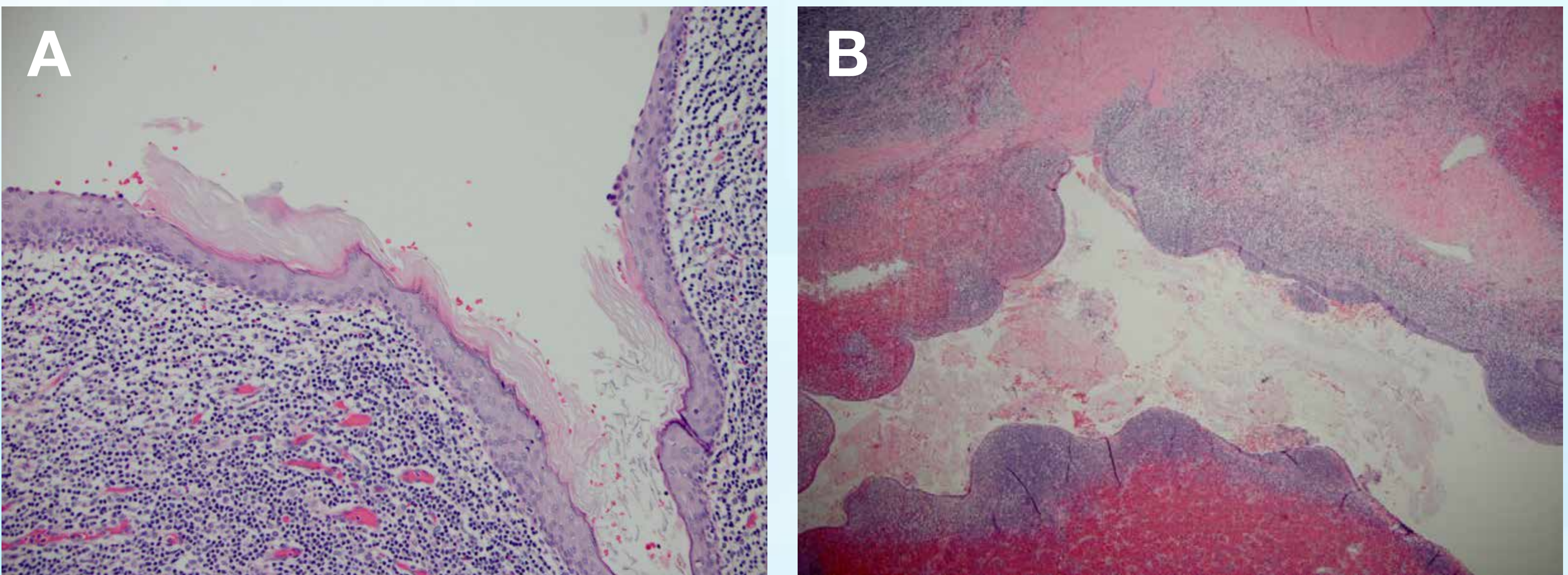
A 64 year old male with a past medical history of hypertension presented to the emergency room for evaluation of intermittent nausea, vomiting, and diarrhea occurring for the past month. His symptoms were associated with abdominal distension, discomfort, and a 25-pound weight loss. He was seen by gastroenterology previously as an out-patient and had undergone an EGD and colonoscopy; both of which were unremarkable aside from mild esophagitis and diverticulosis respectively. During his initial evaluation he was noted to be hypotensive with laboratory evidence of mild anemia, moderate hypoalbuminemia, and acute kidney injury. Computed tomography (CT) of the abdomen and pelvis revealed a significant intra-abdominal mass suspicious of pancreatic origin. Given the degree of hypotension and CT findings, he was transferred to a tertiary care center for continued management. Upon arrival, he underwent abdominal MRI demonstrating a large 28cm x 28cm x22cm abdominal cyst displacing multiple organs with multiple septations (Figure 1). Etiology of the cyst was indeterminate on imaging. Serum tumor markers including CEA and CA-19-19 were within normal limits.

Three days later, the patient underwent surgical exploration and drainage of the cyst. Intraoperatively, it was discovered the mass had originated from the mesenteric root adjacent to the right colon and was adherent to inferior aspect of the portal vein. The cyst was dissected and two liters of brown fluid was expressed. Anaerobic and aerobic cultures were negative. Cytological fluid analysis failed to reveal malignant cells. The (open) cystic mass was resected and histopathological analysis revealed a benign lymphoepithelial cyst (Figure 2).

Following the procedure, his condition stabilized. Improvement was noted in both his vital signs and initial laboratory abnormalities and he was discharged in stable condition. Follow-up CT imaging 6 months failed to reveal a reoccurrence of the mesenteric cyst however commented on a distal pancreatic cyst 4cm x 3cm x 2.5cm. EUS with fine-needle aspiration was performed. Cytology was negative for diagnostic malignancy although cystic CEA was elevated at 2929ng/mL with an amylase of 62IU/L, suggestive of a mucinous neoplasm.<sup>6</sup> The patient eventually underwent robotic assisted laparoscopic distal pancreatectomy with splenectomy. Pathologic surgical specimen evaluation revealed an LEC confined within the pancreas. Eight months later, the patient has remained stable without evidence of new cystic lesions.



**Figure 1:** Transverse (A) and coronal (B) views of abdominal MRI revealing a large abdominal cystic mass.



**Figure 2:** Histological analysis of resected cyst (A and B) revealing a squamous epithelial lining surrounded by a dense collection of inflammatory cells. Collagenous and mucinous contents are visualized in both images.

Table 1. Pancreatic LEC Characteristics Per Case Review <sup>7</sup>	
Total cases (including current report)	148
Sex	
Male	80%
Female	20%
Mean age, years (range)	55 (20-82)
Locations of LEC in the pancreas	
Tail	38%
Body	32%
Head	25%
Neck	4%
Uncinate	1%
Presentation symptoms	
Abdominal pain/discomfort	48%
Asymptomatic/incidental	43%
Fatigue/weight loss	8%
Gastrointestinal disturbance	1%
Management	
Resection	77%
Conservative	13%
Enucleation	10%

## DISCUSSION

- A lymphoepithelial cyst is a true cyst lined by squamous epithelium surrounded by dense mature lymphoid tissue.<sup>1</sup>
- Abdominal LECs are a rare finding in itself with approximately 150 case reports in the literature indicating pancreatic origin.
- A few limited review articles were published analyzing data from case reports and pancreatic LEC characteristics have been described (Table 1).<sup>4-5,7</sup>
- Surgical resection is the gold standard in diagnosing and is indicated in symptomatic cases and when malignancy cannot be excluded.<sup>7</sup>
- In this case report, we were able to report and demonstrate an LEC originating from a location initially outside the pancreas. Its origin, although suggested radiographically by MRI, was confirmed to be from the mesentery surgically.
- To our knowledge and based on published literature, this may be one of the first known occurrences.
- This report further expands the differential on abdominal cystic disease and further contributes to the small body of knowledge surrounding LECs.

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